

#2

OIPE

ENTERED

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/728,309DATE: 12/21/2000
TIME: 10:00:10Input Set : A:\18136-1050.txt
Output Set: N:\CRF3\12212000\I728309.raw

```
3 <110> APPLICANT: Zhang, Jian
4 Herman, Ronald
6 <120> TITLE OF INVENTION: Human VNO Receptor (R1)
8 <130> FILE REFERENCE: 18136-1050
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/728,309
C--> 10 <141> CURRENT FILING DATE: 2000-11-30
10 <160> NUMBER OF SEQ ID NOS: 8
12 <170> SOFTWARE: PatentIn version 3.0
14 <210> SEQ ID NO: 1
15 <211> LENGTH: 1114
16 <212> TYPE: DNA
17 <213> ORGANISM: Homo sapiens
19 <400> SEQUENCE: 1
20 attccagatc atagagatgt tgaatttggg tattattgag aacatggcag aaattatgct 60
22 attctcatta gatctcttgc tttctccac agatatacct tgctttaatt ttccctctaa 120
24 gatgatcaaa ctctcttggg ttattaccat acaaatcttc ttlatccac aagccagctt 180
26 tggaaattca gcaaacacca tctctcttct ttccacac ttcacctttg ttttcagtca 240
28 cagggtctaag tccattgaca tgataattag tcacctgtct ctcatccaca tactgctgct 300
30 ctccactcag gcaatattgg tgcctctaga ctctcttggg tcacagaata ctccaggatga 360
32 tcttaggtat aaggtcattg tctttttaa caaggtgatg aggggcctct ccatctgcac 420
34 cccctgccct ctgagtggtc tccagcccat catcagcccc agcatcttct ccttggcaaa 480
36 gctcaaacat ccttctgcaa gtccatctct aggtattctt ctcttctcat gggctctcaa 540
38 catgttcatt ggtgtaattc tctgctgtac actgcggcta cccccagtga aacggggcca 600
40 gtctctctgt tgcatacag cactgttctt ttttgcctat gagctacacc cacaggagac 660
42 tgtttttcac actaatgact ttgagggatg tcacctttat agggttcatg gtctctcaa 720
44 gaggctacat ggtgattatt ttatacagac aataagaggc tatctcagt ccttcaagca 780
46 gccagcctgt ccccgagtct caccagtga aagagcctcc caggctatct tactgctggt 840
48 gaggtttggc ttacataact ggggtgactt tacgttctca ttttcaggag gltgacatg 900
50 gataaatgat tctctgctag tgtggtctca ggttattgtg gccaatagct atgccgcaat 960
52 tagtctcttg atgctaattt atgctgataa ccaaatattc aagactctgc aaatgttatg 1020
54 gtttaaatat ttgtctctc caaagctcat gttgaaattt aatcgccaat gtggcagtac 1080
56 taagaagtga tgatgagagg ttaatccatt catg 1114
59 <210> SEQ ID NO: 2
60 <211> LENGTH: 1114
61 <212> TYPE: DNA
62 <213> ORGANISM: Homo sapiens
64 <400> SEQUENCE: 2
65 attccagatc atagagatgt tgaatttggg tattattgag aacatggcag aaattatgct 60
67 attctcatta gatctcttgc tttctccac agatatacct tgctttaatt ttccctctaa 120
69 gatgatcaaa ctctcttggg ttattaccat acaaatcttc ttlatccac aagccagctt 180
71 tggaaattca gcaaacacca tctctcttct ttccacac ttcacctttg ttttcagtca 240
73 cagggtctaag tccattgaca tgataattag tcacctgtct ctcatccaca tactgctgct 300
75 ctccactcag gcaatattgg tgcctctaga ctctcttggg tcacagaata ctccaggatga 360
77 tcttaggtat aaggtcattg tctttttaa caaggtgatg aggggcctct ccatctgcac 420
79 cccctgccct ctgagtggtc tccagcccat catcagcccc agcatcttct ccttggcaaa 480
81 gctcaaacat ccttctgcaa gtccatctct aggtattctt ctcttctcat gggctctcaa 540
83 catgttcatt ggtgtaattc tctgctgtac actgcggcta cccccagtga aacggggcca 600
```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/728,309

DATE: 12/21/2000
 TIME: 10:00:10

Input Set : A:\18136-1050.txt
 Output Set: N:\CRF3\12212000\I728309.raw

```

85 gtcttctgtt tgcatacag cactgttctt ttttgcctat gagctacacc cacaggagac 660
87 tgtttttcac actaatgact ttgagggatg tcacctltal agggltcatg gtcctctcaa 720
89 gaggtacat ggtgattatt ttatacagac aataagaggc tatctcaqtg ccttcacaca 780
91 gccagcctgt ccccgagtct caccagtga aagagcctcc caggtatct tactgtctgt 840
93 gagttttgtc ttacatact ggttggactt tacgttctca ttttcaggag gtgtgacatg 900
95 gataaatgat tctctgctag tgtggctcca ggttattgtg gccaatagct atgccgcaat 960
97 tagtcctttg atgctaattt atgctgataa ccaaalattc aagactctgc aaatqttatg 1020
99 gtttaaatat ttgtctcttc caaagctcat gttgaaattt aatcgccaat gtggcagtac 1080
101 taagaagtga tgatgagagg ttautccatt catg 1114
104 <210> SEQ ID NO: 3
105 <211> LENGTH: 357
106 <212> TYPE: PRT
107 <213> ORGANISM: Homo sapiens
109 <400> SEQUENCE: 3
111 Met Leu Lys Leu Val Ile Ile Glu Asn Met Ala Glu Ile Met Leu Phe
112 1 5 10 15
114 Ser Leu Asp Leu Leu Phe Ser Thr Asp Ile Leu Cys Phe Asn Phe
115 20 25 30
117 Pro Ser Lys Met Ile Lys Leu Pro Gly Phe Ile Thr Ile Gln Ile Phe
118 35 40 45
120 Phe Tyr Pro Gln Ala Ser Phe Gly Ile Ser Ala Asn Thr Ile Leu Leu
121 50 55 60
123 Leu Phe His Ile Phe Thr Phe Val Phe Ser His Arg Ser Lys Ser Ile
124 65 70 75 80
126 Asp Met Ile Ile Ser His Leu Ser Leu Ile His Ile Leu Leu Leu Phe
127 85 90 95
129 Thr Gln Ala Ile Leu Val Ser Leu Asp Phe Phe Gly Ser Gln Asn Thr
130 100 105 110
132 Gln Asp Asp Leu Arg Tyr Lys Val Ile Val Phe Leu Asn Lys Val Met
133 115 120 125
135 Arg Gly Leu Ser Ile Cys Thr Pro Cys Leu Leu Ser Val Leu Gln Ala
136 130 135 140
138 Ile Ile Ser Pro Ser Ile Phe Ser Leu Ala Lys Leu Lys His Pro Ser
139 145 150 155 160
141 Ala Ser His Ile Leu Gly Phe Phe Leu Phe Ser Trp Val Leu Asn Met
142 165 170 175
144 Phe Ile Gly Val Ile Phe Cys Cys Thr Leu Arg Leu Pro Pro Val Lys
145 180 185 190
147 Arg Gly Gln Ser Ser Val Cys His Thr Ala Leu Phe Leu Phe Ala His
148 195 200 205
150 Glu Leu His Pro Gln Glu Thr Val Phe His Thr Asn Asp Phe Glu Gly
151 210 215 220
153 Cys His Leu Tyr Arg Val His Gly Pro Leu Lys Arg Leu His Gly Asp
154 225 230 235 240
156 Tyr Phe Ile Gln Thr Ile Arg Gly Tyr Leu Ser Ala Phe Thr Gln Pro
157 245 250 255
159 Ala Cys Pro Arg Val Ser Pro Val Lys Arg Ala Ser Gln Ala Ile Leu
160 260 265 270
162 Leu Leu Val Ser Phe Val Phe Thr Tyr Trp Val Asp Phe Thr Phe Ser

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/728,309
 DATE: 12/21/2000
 TIME: 10:00:10

Input Set : A:\18136-1050.txt
 Output Set: N:\CRF3\12212000\I728309.raw

```

163          27          280          285
165 Phe Ser Gly Gly Val Thr Trp Ile Asn Asp Ser Leu Leu Val Trp Leu
166          290          295          300
168 Gln Val Ile Val Ala Asn Ser Tyr Ala Ala Ile Ser Pro Leu Met Leu
169 305          310          315          320
171 Ile Tyr Ala Asp Asn Gln Ile Phe Lys Thr Leu Gln Met Leu Trp Phe
172          325          330          335
174 Lys Tyr Leu Ser Pro Pro Lys Leu Met Leu Lys Phe Asn Arg Gln Cys
175          340          345          350
177 Gly Ser Thr Lys Lys
178          355
180 <210> SEQ ID NO: 4
181 <211> LENGTH: 348
182 <212> TYPE: PRT
183 <213> ORGANISM: Homo sapiens
185 <400> SEQUENCE: 4
187 Met Ala Glu Ile Met Leu Phe Ser Leu Asp Leu Leu Leu Phe Ser Thr
188 1          5          10          15
190 Asp Ile Leu Cys Phe Asn Phe Pro Ser Lys Met Ile Lys Leu Pro Gly
191          20          25          30
193 Phe Ile Thr Ile Gln Ile Phe Phe Tyr Pro Gln Ala Ser Phe Gly Ile
194          35          40          45
196 Ser Ala Asn Thr Ile Leu Leu Phe His Ile Phe Thr Phe Val Phe
197          50          55          60
199 Ser His Arg Ser Lys Ser Ile Asp Met Ile Ile Ser His Leu Ser Leu
200 65          70          75          80
202 Ile His Ile Leu Leu Leu Phe Thr Gln Ala Ile Leu Val Ser Leu Asp
203          85          90          95
205 Phe Phe Gly Ser Gln Asn Thr Gln Asp Asp Leu Arg Tyr Lys Val Ile
206          100          105          110
208 Val Phe Leu Asn Lys Val Met Arg Gly Leu Ser Ile Cys Thr Pro Cys
209          115          120          125
211 Leu Leu Ser Val Leu Gln Ala Ile Ile Ser Pro Ser Ile Phe Ser Leu
212          130          135          140
214 Ala Lys Leu Lys His Pro Ser Ala Ser His Ile Leu Gly Phe Phe Leu
215 145          150          155          160
217 Phe Ser Trp Val Leu Asn Met Phe Ile Gly Val Ile Phe Cys Cys Thr
218          165          170          175
220 Leu Arg Leu Pro Pro Val Lys Arg Gly Gln Ser Ser Val Cys His Thr
221          180          185          190
223 Ala Leu Phe Leu Phe Ala His Glu Leu His Pro Gln Glu Thr Val Phe
224          195          200          205
226 His Thr Asn Asp Phe Glu Gly Cys His Leu Tyr Arg Val His Gly Pro
227          210          215          220
229 Leu Lys Arg Leu His Gly Asp Tyr Phe Ile Gln Thr Ile Arg Gly Tyr
230 225          230          235          240
232 Leu Ser Ala Phe Thr Gln Pro Ala Cys Pro Arg Val Ser Pro Val Lys
233          245          250          255
235 Arg Ala Ser Gln Ala Ile Leu Leu Leu Val Ser Phe Val Phe Thr Tyr

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/728,309

DATE: 12/21/2000
 TIME: 10:00:10

Input Set : A:\18136-1050.txt
 Output Set: N:\CRF3\12212000\I728309.raw

```

236          260          265          270
238 Trp Val Asp Phe Thr Phe Ser Phe Ser Gly Gly Val Thr Trp Ile Asn
239          275          280          285
241 Asp Ser Leu Leu Val Trp Leu Gln Val Ile Val Ala Asn Ser Tyr Ala
242          290          295          300
244 Ala Ile Ser Pro Leu Met Leu Ile Tyr Ala Asp Asn Gln Ile Phe Lys
245 305          310          315          320
247 Thr Leu Gln Met Leu Trp Phe Lys Tyr Leu Ser Pro Pro Lys Leu Met
248          325          330          335
250 Leu Lys Phe Asn Arg Gln Cys Gly Ser Thr Lys Lys
251          340          345
253 <210> SEQ ID NO: 5
254 <211> LENGTH: 1077
255 <212> TYPE: DNA
256 <213> ORGANISM: Homo sapiens
258 <400> SEQUENCE: 5
259 atgttgaat tggttattat tgagaacatg gcagaaatta tgctattctc attagatctc      60
261 ttgcttttct ccacagatat cctttgcttt aattttcctt ctaagatgat caaaccttct      120
263 ggttttatta ccatataaat cttcttttat ccacaagcca gcttttgaat ttcaqcaaac      180
265 accatccttc ttcttttcca catcttcacc ttgttttcca qtcacaggtc taagtcctat      240
267 gacatgataa ttatgcacct gtctctcacc cacatactgc tgctcttcac tcaggcaata      300
269 ttggtgtcct tagacttctt tgggttcacag aatactcagg atgactcttag gtataaggct      360
271 attgtctttt taaacaaggt gatgagggtc ctctccatct gcaccccctg cctcctgagt      420
273 gtgtctccag ccactcatcag cccacgcatc ttctccttgg caaagctcaa acatccttct      480
275 qcaagtcaca tcttaggatt cttccttttc tcatgggtcc tcaacatgtt cattggtgta      540
277 atcttctgct gtacactgcg gtaaccccca gtgaaacagg gccagtcttc tgtttgtcat      600
279 acagcaactgt tcttttttgc ccatgagcta caccacaggg agactgtttt tcacactaat      660
281 gactttgagg gatgtcacct ttatagggtt catggctctc tcaagaggct acatggtgat      720
283 tattttatac agacaataag aggtatcttc agtgccctca cacagccagc ctgtcccccga      780
285 gtctcaccag tgaagaagagc ctcccaggct atcttactgc tgggtgagttt tgtcttcaca      840
287 tactgggtgg actttacggt ctcattttca ggaggtgtga catggataaa tgattctctg      900
289 ctagtgtggc tccaggttat tgtggccaat agctatgccg caattagtcc ttgtatgcta      960
291 atttatgctg ataaccacaa attcaagact ctgcaaatgt tatgggttaa atatttgtct      1020
293 cctccaaagc tcatgttgaa atttaatcgc caatgtggca gtactaagaa gtgatga      1077
296 <210> SEQ ID NO: 6
297 <211> LENGTH: 45
298 <212> TYPE: PRT
299 <213> ORGANISM: Homo sapiens
301 <400> SEQUENCE: 6
303 Met Leu Lys Leu Val Ile Ile Glu Asn Met Ala Glu Ile Met Leu Phe
304 1          5          10          15
306 Ser Leu Asp Leu Leu Leu Phe Ser Thr Asp Ile Leu Cys Phe Asn Phe
307          20          25          30
309 Pro Ser Lys Met Ile Lys Leu Pro Gly Phe Ile Thr Ile
310          35          40          45
312 <210> SEQ ID NO: 7
313 <211> LENGTH: 1071
314 <212> TYPE: DNA
315 <213> ORGANISM: Homo sapiens

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/728,309
 DATE: 12/21/2000
 TIME: 10:00:10

Input Set : A:\18136-1050.txt
 Output Set: N:\CRF3\12212000\I728309.raw

```

317 <400> SEQUENCE: 7
318 atggcagaaa ttatgctatt ctccattagat ctcttgcttt tctccacaga taccctttgc 60
320 ttttaattttc ctcttaagat gatcaaacctt cctgggtttta ttaccataca aatcttcttt 120
322 tatccacaag ccagcttttg aatttcagca aacaccatcc ttctcttttt ccacatcttc 180
324 acctttgttt tcagtcacag gtctaagtc attgacatga taattagtc cctgtctctc 240
326 atccacatac tgctgctctt cactcaggca atattgggtg ccttagactt ctttggttca 300
328 cagaatactc aggatgatct taggtataag gtcattgtct ttttaaacaa ggtgatgagg 360
330 ggctctctca tctgcacccc ctgctctctg agtggtgctc aggccatcat cagcccccagc 420
332 atcttctcct tggcaagct caaacatcct tctgcaagtc acatcttagg attcttctt 480
334 ttctcatggg tctcaacat gttcatttgg gtaattctct gctgtacact gcggctaccc 540
336 ccagtqaaac ggggccagtc ttctgtttt cctacagcac tgttctttt tgcctatgag 600
338 ctacacccac aggagactgt ttttcacact aatgactttg agggatgtca cctttatagg 660
340 gttcatggtc ctctcaagag gctacatggt gattatttta taccagacaat aagaggctat 720
342 ctcaagtgcct tcacgcagcc agcctgtccc cgagtctcac cagtgaagaag agcctcccag 780
344 gctatcttac tgctgggtgag ttttgtcttc acatactggg tggactttac gttctcattt 840
346 tcaggagggtg tgacatggat aaatgattct ctgctagtgt ggtccagggt tatgtggccc 900
348 aatagctatg ccgcaattag tctttgatg ctaatttatg ctgataacca aatattcaag 960
350 actctgcaaa tgttatgggt taaatatatt tctcttccaa agctcatgtt gaaatttaat 1020
352 cgccaatgtg gcagtactaa gaagtgatga tgagaggtta atccattcat g 1071
355 <210> SEQ ID NO: 8
356 <211> LENGTH: 1071
357 <212> TYPE: DNA
358 <213> ORGANISM: Homo sapiens
360 <400> SEQUENCE: 8
361 atggcagaaa ttatgctatt ctccattagat ctcttgcttt tctccacaga taccctttgc 60
363 ttttaattttc ctcttaagat gatcaaacctt cctgggtttta ttaccataca aatcttcttt 120
365 tatccacaag ccagcttttg aatttcagca aacaccatcc ttctcttttt ccacatcttc 180
367 acctttgttt tcagtcacag gtctaagtc attgacatga taattagtc cctgtctctc 240
369 atccacatac tgctgctctt cactcaggca atattgggtg ccttagactt ctttggttca 300
371 cagaatactc aggatgatct taggtataag gtcattgtct ttttaaacaa ggtgatgagg 360
373 ggctctctca tctgcacccc ctgctctctg agtggtgctc aggccatcat cagcccccagc 420
375 atcttctcct tggcaagct caaacatcct tctgcaagtc acatcttagg attcttctt 480
377 ttctcatggg tctcaacat gttcatttgg gtaattctct gctgtacact gcggctaccc 540
379 ccagtgaaac ggggccagtc ttctgtttgt cctacagcac tgttctttt tgcctatgag 600
381 ctacacccac aggagactgt ttttcacact aatgactttg agggatgtca cctttatagg 660
383 gttcatggtc ctctcaagag gctacatggt gattatttta taccagacaat aagaggctat 720
385 ctcaagtgcct tcacacagcc agcctgtccc cgagtctcac cagtgaagaag agcctcccag 780
387 gctatcttac tgctgggtgag ttttgtcttc acatactggg tggactttac gttctcattt 840
389 tcaggagggtg tgacatggat aaatgattct ctgctagtgt ggtccagggt tatgtggccc 900
391 aatagctatg ccgcaattag tctttgatg ctaatttatg ctgataacca aatattcaag 960
393 actctgcaaa tgttatgggt taaatatatt tctcttccaa agctcatgtt gaaatttaat 1020
395 cgccaatgtg gcagtactaa gaagtgatga tgagaggtta atccattcat g 1071

```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/728,309

DATE: 12/21/2000
TIME: 10:00:11

Input Set : A:\18136-1050.txt
Output Set: N:\CRF3\12212000\I728309.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application No
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date